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| AMENDMENT TRANSMITTAL LETTER (Small Entity) | | Docket No. RM26ii | |
| Applicant(s): | | | |
| Serial No. 09/769,670 | Filing Date 1/25/01 | Examiner Steven Post | Group Art Unit 3653 |



Invention:
Grounding System for Floating Roofs in Flammable Storage Tanks

TO THE ASSISTANT COMMISSIONER FOR PATENTS

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Transmitted herewith is an amendment in the above-identified application.

☐ Small Entity status of this application has been established under 37 CFR 1.27 by a verified statement previously submitted.

☐ A verified statement to establish Small Entity status under 37 FR 1.27 is enclosed.

The fee has been calculated and is transmitted as shown below.

| CLAIMS AS AMENDED | | | | | |
|--|-------------------------------------|-----------------------------|--------------------------------|---------|-------------------|
| | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST # PREV. PAID FOR | NUMBER EXTRA CLAIMS PRESENT | RATE | ADDITIONAL FEE |
| TOTAL CLAIMS | 24 - | 20 = | 4 x | \$9.00 | \$36.00 |
| INDEP. CLAIMS | 4 - | .3 = | 1 x | \$42.00 | \$42.00 |
| Multiple Dependent Claims (check if applicable) <input type="checkbox"/> | | | | | \$0.00 |
| TOTAL ADDITIONAL FEE FOR THIS AMENDMENT | | | | | \$78.00 |

- ☐ No additional fee is required for amendment.
- ☐ Please charge Deposit Account No. _____ in the amount of _____
A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of _____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 50-0617
A duplicate copy of this sheet is enclosed.
 - ☒ Any additional filing fees required under 37 C.F.R. 1.16.
 - ☒ Any patent application processing fees under 37 CFR 1.17.

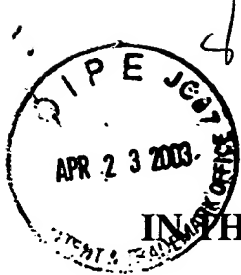
Rick Martin
Signature

Dated: 4-18-03

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| I certify that this document and fee is being deposited on 4/18/2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231. | |
| <i>Shireen Marshall</i> Signature of Person Mailing Correspondence | |
| Shireen Marshall Typed or Printed Name of Person Mailing Correspondence | |

cc:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Roy B. Carpenter, Jr. et al.
Serial No.: 09/769,670 Group Art Unit: 3653
Filed: January 25, 2001 Examiner: Steven Post
For: Grounding System for Floating Attorney Docket: RM26ii
Roofs in Flammable Storage
Tanks

Assistant Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the above referenced application as follows:

In the Claims:

For the convenience of the Examiner, all claims, including those not changed by the present amendment, have been included.

1. (original) In a fluid/liquid storage tank with a sidewall and a floating roof floating atop the fluid/liquid, an improved grounding system comprising:
- a reel connected to the sidewall; and
- said reel having a low impedance conductor connected to the floating roof.

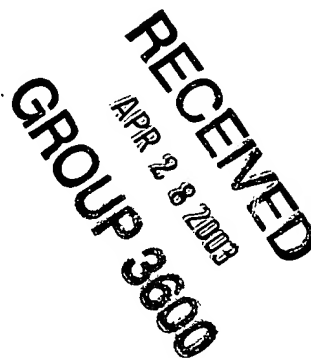
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02 FC:2202 36.00 CH

CERTIFICATE OF MAILING

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Shireen Marshall
Shireen Marshall



2. (original) The improvement of claim 1, wherein the reel further comprises a take up spool which keeps any slack out of the conductor and maintains a shortest fractional length.
3. (original) The improvement of claim 2, wherein the take up spool further comprises a spring.
4. (original) The improvement of claim 1, wherein the wire further comprises a bare braided copper cable.
5. (original) The improvement of claim 1, wherein the reel further comprises a base having bolts secured to the tank wall.
6. (original) The improvement of claim 4, wherein the bare braided copper cable further comprises a lug having a bolt secured to the floating roof.
7. (original) The improvement of claim 6, wherein the impedance of the lug and bolt, plus the braided copper cable plus the reel is about one ohm or less.
8. (original) A grounding system for a storage tank having a floating roof, said grounding system comprising:
 - a wire having an end connected to the floating roof;
 - said wire having a second end wound around a spool in a reel;
 - said reel having a grounded connection to a wall segment of the tank; and
 - said wire having a low impedance.

9. (original) The grounding system of claim 8, wherein the wire further comprises a flat braided copper conductor.
10. (original) The grounding system of claim 9, wherein the spool further comprises a take up mechanism to minimize slack in the conductor.
11. (original) The grounding system of claim 10, wherein the total impedance of the system is about five ohms or less.
12. (original) A grounding system for a tank with a floating roof, said grounding system comprising:
means for taking slack out of a cable connected from a floating roof to an upper segment of a tank wall, and thereby maintaining a minimum length; and
said cable having a low impedance.
13. (original) The grounding system of claim 11, wherein the means of taking slack out further comprises a reel having a take up spool.
14. (original) The grounding system of claim 13, wherein the take up spool further comprises a spring functioning to constantly pull up on the cable.
15. (original) The grounding system of claim 13, wherein the cable further comprises a braided conductor.
16. (original) The grounding system of claim 15, wherein the system has a total impedance of about five ohms or less.

17. (original) The grounding system of claim 15, wherein the braided conductor has a bolt connection to the floating roof, and the reel has a base with a bolt connection to the tank wall.

18. (new) In a fluid/liquid storage tank with a sidewall and a floating roof floating atop the fluid/liquid, an improved grounding system comprising:
a reel connectable to the sidewall; and
said reel having a low impedance conductor connectable to the floating roof.

19. (new) The improvement of claim 18, wherein the reel further comprises a take up spool which keeps any slack out of the conductor and maintains a shortest fractional length.

20. (new) The improvement of claim 19, wherein the take up spool further comprises a spring.

21. (new) The improvement of claim 18, wherein the wire further comprises a bare braided copper cable.

22. (new) The improvement of claim 18, wherein the reel further comprises a base having bolts secured to the tank wall.

23. (new) The improvement of claim 21, wherein the bare braided copper cable further comprises a lug having a bolt secured to the floating roof.

24. (new) The improvement of claim 23, wherein the impedance of the lug and bolt, plus the braided copper cable plus the reel is about one ohm or less.

In view of the above, Applicant respectfully requests that this application be passed to allowance.

Respectfully submitted,



Date: 4-18-03

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